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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/580,166	05/30/2000	Masami Ogata	SONY-T0602	2468

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EXAMINER

GENCO, BRIAN C

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/580,166

Applicant(s)

OGATA ET AL.

Examiner

Brian C Genco

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 3-6 and 10-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7-9 and 14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Election/Restrictions

Applicant's election without traverse of Species III in the reply filed on October 19, 2004 is acknowledged. Examiner notes that Applicant has designated claims 1, 2, 8, and 9 as reading on this species. Examiner notes that claims 7 and 14 further read on the elected species.

Drawings

Figures 3A-3C and 30 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by (US PG-PUB 2003/0133035 to Hatano).

In regards to claim 1 Hatano discloses an image capturing apparatus for capturing a plurality of images with different amounts of exposure to compose said images into a single composite image (e.g., abstract), said image capturing apparatus comprising:

misregistration amount detecting means for detecting the amounts of misregistration of respective images except for a reference image, said reference image selected from said plurality of images, with respect to said reference image (e.g., the reference image is the image stored in image memory 204 as shown in Fig. 1 wherein the misregistration amount detecting means is element 207 of Fig. 1);

misregistration correcting means for correcting the misregistration of the respective images except for said reference image with respect to said reference image based on said misregistration amounts (e.g., elements 202 and 205 of Fig. 1; paragraphs 0039, 0040, and 0041); and

image composing means for composing said reference image and all of the respective misregistration corrected images except for said reference image (e.g., element 202 of Fig. 1; paragraphs 0040 and 0041).

In regards to claim 8 see Examiners notes on the rejection of claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 7, 9, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US PG-PUB 2003/0133035 to Hatano) in view of (USPN 5,905,527 to Inou et al.).

In regards to claim 2 Hatano does not disclose the specifics of how the motion vectors are calculated and as such does not disclose nor preclude the limitations of claim 2.

Inou discloses calculating a misregistration amount between two subsequent frames through a calculation of motion vectors. In particular Inou discloses:

feature point extracting means for extracting feature points from said reference image and the respective images except said reference image, respectively (e.g., element 201 of Fig. 6; column 5, lines 55-67; Examiner notes that Inou discloses to utilize the band pass filter to remove outliers that would make the amount of movement calculated to be detected incorrectly and further that binary coding the image and passing it through the band pass filter also reduces the amount of data to be processed and eliminates influences of a change in illumination intensity);

confidence level calculating means for calculating a confidence level for each of the images except for said reference image as said misregistration amount for each of a plurality of previously provided misregistration amount candidates, based on a positional relationship of the feature points in said reference image and the feature points in the respective images except for said reference image (e.g., elements 203 and 206 of Fig. 6; column 6, line 31 – column 7, line 19); and

maximum value detecting means for detecting said misregistration amount candidate which presents a maximum confidence level within said misregistration amount candidates as said misregistration amount in each of the images except for said reference image (e.g., column 8, lines 20-24; column 8, line 57 – column 9, line 4; Examiner notes that Inou discloses that by finding the maximum value and applying it to the conditional equation in column 8, line 63, the

movement vectors recognized as ineffective vectors are filtered out thus improving the accuracy with which the movement vector of the image is determined).

Therefore it would have been obvious to one skilled in the art at the time of the invention to have utilized Inou means for calculating the misregistration of two images in order to remove outliers that would make the amount of movement calculated to be detected incorrectly, reduce the amount of data to be processed, eliminate influences of a change in illumination intensity, and filter out the movement vectors recognized as ineffective vectors so as to improve the accuracy with which the movement vector of the image is determined.

In regards to claim 7 note that in Fig. 1 the luminance signal is the input to the image shake correcting circuit 113 and as such the luminance signal is the input to the band pass filter 201 of Fig. 6.

In regards to claim 9 and 14 see Examiners notes on the rejections above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian C. Genco who can be reached by phone at 571-272-7364 or by fax at 571-273-7364. The examiner can normally be reached on Monday thru Friday 8:30am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Groody can be reached at 571-272-7950. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

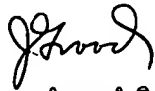
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is 571-272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian C Genco
Examiner
Art Unit 2615

March 11, 2005


James J. Groody
Supervisory Patent Examiner
Art Unit 262-2615